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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,204	07/12/2000	DOUGLAS E. OLSON	MAN03P-110	7901

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EXAMINER

SHAPIRO, JEFFERY A

ART UNIT	PAPER NUMBER
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3653

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,204

Applicant(s)

OLSON ET AL.

Examiner

Jeffrey A. Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/28/03 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 12-16 and 18-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Barry (4,065,006). Barry discloses the following.

As described in Claim 1;

1. a sortation conveyor having a main *conveying* line defined by a conveying surface *that conveys randomly arranged containers of sorted mail*; (Note that the rail system may be construed as a sortation conveyor.)

1a. *said conveying surface comprising at least one of conveyor rollers and a conveying belt*;

2. a plurality of spurs extending *generally horizontally* from *at least one side of* said *main* line (see figure 1, noting offshoots or spurs such as element (CST), for example);

2a. *said main line including a plurality of diverter mechanisms, each of said diverter mechanisms being positioned at an associated one of said spurs;*

3. a diverter mechanism (36) at each of said spur, *said diverter mechanisms being positioned along said conveying surface and being operable to* selectively divert containers *generally horizontally* from said conveying surface onto the associated one of said spurs (Note that a rail switch, which is necessarily used by the system of Barry, is reasonably construed as a diverter which diverts rail cars, which are reasonably construed as containers, onto a particular spur or offshoot. Note that a rail system having several spurs or offshoots from a main line necessarily has a rail switch to provide capability of diverting a rail car from the main line to a particular offshoot or spur. Such a system can not work otherwise. This is in addition to the diverter (36) which also fits the limitations of the independent claim.)

4. at least one transport mechanism which transports containers from each of said spurs to a *particular dispatch* cart juxtaposed with that spur; (See, for example, figures 22, 41 or 71—note that either diverter (36) or a rail switch, as described previously, may be construed to meet this set of

limitations—note also element (38), which transfers containers to and from a car as well as figure 31, which illustrates a conveyor for transferring containers from each car (which itself can be construed as a container). Note also Barry '194 and '569, incorporated by reference in Barry '006, which details a transfer device which transfers containers from one conveyor to another conveyor (note that a rail car may be construed as a portion of a conveyor);

4a. *said at least one transport mechanism that removes containers from each of said spurs, moves the removed containers generally vertically to a position adjacent to an opening in the particular dispatch cart, and inserts the removed containers into the opening in the particular dispatch cart;*

As described in Claim 2;

5. *said at least one transport mechanism is automatically operated and said carts are hand-operated (note that regardless of whether the carts are hand operated or not, the apparatus and system of Barry functions as described in Claim 2);*

As described in Claim 3;

6. *a diverter mechanism (36) which diverts containers from a feed line onto said conveying surface; (Note that a feed line may be construed to be one of the spur lines which feed another spur line.)*

As described in Claim 4;

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7. said at least one transport mechanism lowers containers from each of said spurs to a subjacent cart associated with that spur; (Note the lift apparatus' described in US 3,528,569 and US 3,677,194, both incorporated by reference in Barry at col. 6, lines 25-29.)

As described in Claim 5;

8. said at least one transport mechanism (note overhead device (G)) includes a plurality of stationary transport mechanisms, one associated with each of said spurs; (Note also that it would be expected that such transfer devices would be necessary where movement of containers from one spur to another would be required for efficient movement of cargo.)

As described in Claim 6;

9. said at least one transport mechanism travels between plural ones of said spurs; (Note that overhead device (G) is capable of transporting a spur and that transfer mechanism depicted in figure (22) is also capable of transport between spurs by said diverting mechanisms.)

As described in Claim 7;

10. said at least one transport mechanism (G) raises a subjacent cart associated with that spur to the level of that spur and moves containers directly from the spur to the cart; (Note again, that a cart is construed to be the flat car that containers are placed on.)

As described in Claim 8;

11. said transport mechanism includes an extendable support member and a vertical lift, said extendable support member adapted to retrieve containers from said at least one of said spurs (see the '369 patent, for example);
12. inserting containers to the associated cart;
13. said vertical lift adapted to moving said support member between the vertical level of said one of said spurs and the vertical level of the associated cart;

As described in Claim 12;

18. said extendable support member is extended according to a controlled acceleration profile; (Note that the apparatus described in the '569 patent is capable of extending and contracting at a controlled acceleration profile, and would be expected to behave in such a fashion so as to exert maximum power to the container being lifted and to raise or lower said containers so as to not disturb the contents inside.)

As described in Claim 13.

19. said extendable member is extended by a variable frequency motor; (Note that it is considered to be inherent that raising and lowering would be accomplished by a motor, and that a variable frequency motor, such as an AC motor would be used. It is also noted that regardless of

the type of motor, the apparatus of Barry still is construed to function as described in the claims.)

As described in Claim 14;

20. said vertical lift is servo controlled; (See argument described above regarding Claim 13.)

As described in Claim 15;

21. a plurality of said transport mechanisms wherein each of said transport mechanisms is inhibited from operation when a cart serviced by that transport mechanism is being replaced; (Note that it is, at the very least, inherent that the transport mechanisms would be inhibited when carts are being changed or maintenance is being performed so that the transport mechanism does not damage a cart or cargo, or become damaged itself.)

As described in Claim 16;

22. other transport mechanisms are not inhibited from operation when one of said transport mechanisms is inhibited from operation; (It would be expected that other transport mechanisms would be operational so as to continue to maximize work throughput and efficiency.)

As described in Claim 19;

23. each of said diverters is a pop-up diverter; (Note that the rail diverter functions by extending outward from a particular rail or towards a particular rail, thereby diverting a load from one spur to another.

As described in Claim 20;

24. wherein said spurs are arranged on both sides of said conveying surface and wherein each of said diverters is bi-directional; (See figure 1 of Barry, noting that the diverters are considered to be bi-directional from the standpoint that they can divert between two different tracks.)

As described in Claim 21;

25. an alignment device (32a or 276A) positioned adjacent each of said carts, which aligns containers being inserted to the associated cart;

As described in Claim 22;

26. said alignment device is funnel shaped; (Note that the tips of alignment devices (32a or 276a are cone-shaped, which is construed to be funnel-shaped).

4. Claims 1-6, 8-21 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Weir. Weir discloses the apparatus as follows.

As described in Claim 1;

1. a sortation conveyor (178) having a main line defined by a conveying surface;
2. a plurality of spurs (note 23, for example) extending from said mail line;
3. a diverter mechanism (128) at each of said spurs (note that a spur may also be construed as a position in the racks (177 or 176), *said diverter mechanisms being positioned along said conveying surface and*

being operable to selectively divert containers from said conveying surface onto the associated one of said spurs (note that the diverter mechanism (128) is necessarily positioned along said conveying surface, otherwise, the diverter mechanism would not be able to divert items other "spurs") ;

4. at least one transport mechanism (23, 24 and 25) which transports containers from each of said spurs to a cart (note that a truck trailer may be construed as a cart) juxtaposed with that spur;

As described in Claim 2;

5. said at least one transport mechanism is automatically operated and said carts are hand-operated (see figure 12b);

As described in Claim 3;

6. a diverter mechanism (124, 125) which diverts containers from a feed line onto said conveying surface;

As described in Claim 4;

7. said at least one transport mechanism lowers containers from each of said spurs to a subjacent cart associated with that spur (note that the diverter mechanism (124) lowers items to a level at which the containers are diverted along (24) to a cart (s)—(see figure 2);

As described in Claim 5;

8. said at least one transport mechanism includes a plurality of stationary transport mechanisms (note that there are several stacker cranes (120), and several conveyors (24), each of which could be

construed to be stationary transport mechanisms, or capable of stationary transport), one associated with each of said spurs;

As described in Claim 6;

9. said at least one transport mechanism travels between plural ones of said spurs (note that cranes (120) are capable of moving between plural spurs—see figure 19, for example);

As described in Claim 8;

11. said transport mechanism includes an extendable support member (25) and a vertical lift, said extendable support member adapted to retrieve containers from said at least one of said spurs;

12. inserting containers to the associated cart (S);

13. said vertical lift adapted to moving said support member between the vertical level of said one of said spurs and the vertical level of the associated cart;

As described in Claim 9;

14. said extendable support member (25) or (128) includes a plurality of fingers (63) or (140) which comb between portions of said at least one of said spurs below containers supported on that spur;

As described in Claims 10 and 17;

15. said spur includes a conveying surface made up of a plurality of roller members (note in figure 13, for example, that the chain belts are powered by rotating toothed gears that act as roller members);

16. said fingers comb between said roller members (see figure 13);

As described in Claim 11;

17. said vertical lift elevates said fingers upwardly in order to retrieve a container from said one of said spurs and elevates said fingers downwardly in order to insert a container to the associated cart (see figure 13);

As described in Claim 12;

18. said extendable support member is extended according to a controlled acceleration profile; (Note that it is, at the very least, inherent that one ordinarily skilled in the art would control the interaction with the cart or container by said support member so as to not disturb or damage the cart or container.)

As described in Claim 13.

19. said extendable member is extended by a variable frequency motor; (Note that it is considered to be inherent that raising and lowering would be accomplished by a motor, and that a variable frequency motor, such as an AC motor would be used. It is also noted that regardless of the type of motor, the apparatus of Weir still is construed to function as described in the claims.)

As described in Claim 14;

20. said vertical lift is servo controlled; (See argument described above regarding Claim 13.)

As described in Claim 15;

21. a plurality of said transport mechanisms wherein each of said transport mechanisms is inhibited from operation when a cart serviced by that transport mechanism is being replaced; (Note that it is, at the very least, inherent that the transport mechanisms would be inhibited when carts are being changed or maintenance is being performed so that the transport mechanism does not damage a cart or cargo, or become damaged itself.)

As described in Claim 16;

22. other transport mechanisms are not inhibited from operation when one of said transport mechanisms is inhibited from operation; (It would be expected that other transport mechanisms would be operational so as to continue to maximize work throughput and efficiency.)

As described in Claim 19;

23. each of said diverters is a pop-up diverter (note that diverter (128) raises and lowers);

As described in Claim 20;

24. wherein said spurs are arranged on both sides of said conveying surface and wherein each of said diverters is bi-directional (see figure 13);

As described in Claim 21;

25. an alignment device positioned adjacent each of said carts, which aligns containers being inserted to the associated cart (note that it is

construed that the forks or fingers (25, 63 or 70) are construed to be alignment devices which aligns containers next to each other—see also figures 7-9);

As described in Claim 23;

27. said fingers (25) are extendable horizontally in order to engage a container;

As described in Claim 24;

28. said extendable support member further includes a stripper member extendable horizontally independently of said fingers in order to slide containers off of said fingers; (Note that fingers (55) act as strippers with stationary fingers (63) so as to move horizontally and independently of each other—see col. 3, lines 60-72.)

As described in Claim 25; -

29. including a plurality of cart areas each having an enclosure with a movable gate that can be selectively opened to allow other carts in other cart areas to be loaded while one cart is being removed; (Note that each truck (construed as a cart) has doors which may be closed, and that one of these trucks may be removed while one is being loaded.)

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry '006. Barry et al. Barry et al discloses a conveyor system as described above. Barry does not expressly disclose, but Huang et al discloses the following.

As described in Claim 32,

26a. said conveying surface is defined by a line shaft conveyor (see col. 6, lines 50-53—see also Collins et al, which describes a line shaft conveyor)—(note also that a line shaft conveyor is considered to be a functional equivalent of the conveyor used in the system of Barry);

Both Barry '006 and Huang et al are considered analogous art since they both concern conveyors and the movement of materials on them.

At the time of the invention, it would have been obvious to one ordinarily skilled in the art to have used a line shaft conveyor in the system of Barry.

The suggestion/motivation would have been to provide synchronized force to the drive rollers of the conveyor and to allow reversal of the drive rollers. See col. 5, lines 48-50, 62-65, col. 6, lines 34-39 and 50-53.

Therefore, it would have been obvious to combine Barry '006 and Huang et al to obtain the invention as described in Claim 32.

7. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weir. Weir discloses a conveyor system as described above. Weir does not expressly disclose, but Huang et al discloses the following.

As described in Claim 32,

26a. said conveying surface is defined by a line shaft conveyor (see col. 6, lines 50-53—see also Collins et al, which describes a line shaft conveyor)—(note also that a line shaft conveyor is considered to be a functional equivalent of the conveyor used in the system of Weir);

Both Weir and Huang et al are considered analogous art since they both concern conveyors and the movement of materials on them.

At the time of the invention, it would have been obvious to one ordinarily skilled in the art to have used a line shaft conveyor in the system of Weir.

The suggestion/motivation would have been to provide synchronized force to the drive rollers of the conveyor and to allow reversal of the drive rollers. See col. 5, lines 48-50, 62-65, col. 6, lines 34-39 and 50-53.

Therefore, it would have been obvious to combine Weir and Huang et al to obtain the invention as described in Claim 32.

8. Claims 1-8, 12-16 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughan et al (4,058,217) in view of Hainsworth. Vaughan et al discloses the following.

As described in Claim 1;

1. a sortation conveyor having a main *conveying* line (4) defined by a conveying surface *that conveys randomly arranged containers of sorted mail*; (Note that the system of Vaughan et al handles bags randomly fed to the system.)

- 1a. *said conveying surface comprising at least one of conveyor rollers and a conveying belt (note that conveyor belts (5 and 10) are described as belts—see col. 6, lines 25-50) ;*
2. *a plurality of spurs (7) extending generally horizontally from at least one side of said main line (see figure 1, noting offshoots or spurs such as element (7), for example);*
- 2a. *said main line including a plurality of diverter mechanisms, each of said diverter mechanisms being positioned at an associated one of said spurs (see col. 6, lines 25-29);*
3. *a diverter mechanism (see col. 6, lines 25-29) at each of said spur, said diverter mechanisms being positioned along said conveying surface and being operable to selectively divert containers generally horizontally from said conveying surface onto the associated one of said spurs (Note a Lee (US 6,220,422 B1) which illustrates just such a gate/diverter mechanism.)*
4. *at least one transport mechanism which transports containers from each of said spurs to a particular dispatch cart juxtaposed with that spur; (See, for example, col. 6, lines 52-58.)*

Vaughan et al does not expressly disclose, but Hainsworth discloses the following.

As described in Claim 1;

4a. *said at least one transport mechanism (10) that removes containers from each of said spurs, moves the removed containers generally vertically to a position adjacent to an opening in the particular dispatch cart, and inserts the removed containers into the opening in the particular dispatch cart; (Note that the apparatus of Hainsworth performs this function. See also O'brien (US 2,430,945) and Sang (US 5,143,194) as further examples of carts that can be used with the system of Vaughan et al.*

Response to Arguments

9. Applicant's arguments filed 9/4/02 have been fully considered but they are not persuasive. New rejection of Vaughan et al in view of Hainsworth appears to obviate the Applicant's independent claim, as described above. The Examiner encourages Applicant's Representative to contact the Examiner should there be any further questions or clarification required.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gannon, Henderson, Heit et al, and Prim et al are cited as examples of conveyors with spurs and diverters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is

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(703)308-3423. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (703)306-4173. The fax phone numbers for the organization where this application or proceeding is assigned are (703)306-4195 for regular communications and (703)306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.



Jeffrey A. Shapiro
Patent Examiner,
Art Unit 3653



DONALD P. WALSH
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July 14, 2003